

## SUBSTITUTE SPECIFICATION-CLEAN VERSION

### WHAT IS CLAIMED IS:

1. An isolated genomic nucleic acid molecule, said nucleic acid molecule obtainable from human chromosome 7 having a nucleotide sequence at least 95% identical to a sequence selected from the group consisting of:

5 (a) a nucleic acid molecule encoding a polypeptide selected from the group consisting of human SNARE YKT6 depicted in SEQ ID NO:1, human glucokinase depicted in SEQ ID NO:2, human adipocyte enhancer binding protein 1 depicted in SEQ ID NO:3 and DNA directed 50kD regulatory subunit (POLD2) depicted in SEQ ID NO:4 and variants thereof;

a nucleic acid molecule selected from the group consisting of SEQ ID NO:5 which encodes human  
10 SNARE YKT6 depicted in SEQ ID NO:1, SEQ ID NO:6 which encodes human glucokinase depicted in SEQ ID NO:2, SEQ ID NO:8 which encodes human adipocyte enhancer binding protein 1 depicted in SEQ ID NO:3 and SEQ ID NO:7 which encodes DNA directed 50kD regulatory subunit (POLD2) depicted in SEQ ID NO:4 and variants thereof (c) a nucleic acid molecule extending from the 5'-end of SEQ ID NO:5 to the 3'-end of SEQ ID NO:8 that comprises the contiguous coding sequences for  
15 SNARE YKT6, glucokinase, POLD2 and the adipocyte enhancer binding protein 1;

(d) a nucleic acid molecule which hybridizes to any one of the polynucleotides specified in (a)-(c)

20 (e) a nucleic acid molecule which is a reverse complement of the polynucleotides specified in (a)-(c);

2. A nucleic acid construct comprising the nucleic acid molecule of claim 1.

3. An expression vector comprising the nucleic acid molecule of claim 1.

4. A recombinant host cell comprising the nucleic acid molecule of claim 1.

25 Claim 5 (cancelled)

6. A method for obtaining a polypeptide encoded by a nucleic acid molecule obtainable from human chromosome 7, said polypeptide selected from the group consisting of human SNARE YKT6, human glucokinase, human adipocyte enhancer binding protein 1 and DNA directed 50kD regulatory subunit (POLD2) comprising:

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(a) culturing the recombinant host cell of claim 4 under conditions that provide for the expression of said polypeptide and

(b) recovering said expressed polypeptide.

- 5 7. A method for preparing an antibody specific to a polypeptide selected from the group consisting of human SNARE YKT6, human Igglucokinase, human adipocyte enhancer binding protein 1 and DNA directed 50kD regulatory subunit (POLD2) comprising:
- (a) obtaining a polypeptide according to the method of claim 6;
- (b) optionally conjugating said polypeptide to a carrier protein;
- 10 (c) immunizing a host animal with said polypeptide or polypeptide-carrier protein conjugate of step (b) with an adjuvant and
- (d) obtaining antibody from said immunized host animal.
- 15 8. An isolated nucleic acid molecule of at least 15 nucleotides or mimetic which hybridizes at high stringency to a non-coding region specific to the nucleic acid molecule of claim 1, which non-coding region is selected from the group consisting of an intron, a splice junction, a 5' non-coding region, a transcription factor binding region, an expression control region and a 3' non-coding region.
- 20 9. A method of diagnosing a pathological condition or susceptibility to a pathological condition in a subject comprising:
- (a) isolating genomic DNA from a subject;
- (b) determining the presence or absence of a variant in said genomic DNA using the
- 25 nucleic acid molecule of claim 8 and
- (c) diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or absence of said variant.

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10. A composition comprising the nucleic acid molecule of claim 1 and a carrier.
11. A composition comprising the nucleic acid molecule of claim 8 and a carrier.
- 5 12. A method for preventing, treating or ameliorating a medical condition, comprising administering to a subject an amount of the composition of claim 10 effective to prevent, treat or ameliorate said medical condition.
- 10 13. A method for preventing, treating or ameliorating a medical condition, comprising administering to a subject an amount of the composition of claim 11 effective to prevent, treat or ameliorate said medical condition.
14. A kit comprising the nucleic acid molecule of claim 8.
- 15 15. The kit according to claim 14, in which the polynucleotide is labeled with a detectable substance.
16. The kit according to claim 14, which comprises a plurality of nucleic acid molecules.
- 20 Claims 17-22 are cancelled.
23. A method for modulating levels of human SNARE YKT6, human glucokinase, human adipocyte enhancer binding protein 1 or DNA directed 50kD regulatory subunit (POLD2) in a subject in need thereof comprising administering to said subject an amount of the nucleic acid molecule of claim 1 effective to modulate said human SNARE YKT6, human glucokinase, human adipocyte enhancer binding protein 1 or DNA directed 50kD regulatory subunit (POLD2) levels.
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24. A method for modulating levels of human SNARE YKT6, human glucokinase, human adipocyte enhancer binding protein 1 or DNA directed 50kD regulatory subunit (POLD2) in a subject in need thereof comprising administering to said subject an amount of the nucleic acid molecule of claim 8 effective to modulate said human SNARE YKT6, human glucokinase, human adipocyte enhancer binding protein 1 or DNA directed 50kD regulatory subunit (POLD2) levels.

25. A method of identifying variants of SEQ ID NOS: 5, 6, 7 or 8 comprising  
(a) isolating genomic DNA from a subject and  
(b) determining the presence or absence of a variant in said genomic DNA using the nucleic acid molecule of claim 8.

26 A method for detecting the presence or absence of a non-coding nucleic acid sequence specific to the nucleic acid molecule of claim 1 in a sample, said method comprising contacting the sample with a nucleic acid molecule of at least 15 nucleotides which hybridizes at high stringency to a non-coding region specific to the nucleic acid molecule of claim 1, which non-coding region is selected from the group consisting of an intron, a splice junction, a 5' non-coding region, a transcription factor binding region, an expression control region and a 3' non-coding region.